

REMARKS

The Office Action mailed April 22, 2002, has been received and carefully reviewed. Reconsideration and withdrawal of the rejections of the claims of the above-identified application is respectfully requested. Claim 1 has been amended, and new claims 36-52 have been added. Support for the amendment and new claims can be found in the specification and drawings as originally filed. No new matter has been added.

Double Patenting

Claim 1 was rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over all claims of US 4,224,631. While not conceding the correctness of the rejection, Applicant will file a Terminal Disclaimer upon indication of allowable subject matter.

Rejections Under 35 U.S.C. §102(b)

Claim 1 was rejected as being anticipated by Boyd et al. (5,562,733). Boyd is cited as teaching an intervertebral implant having a first transverse member and a second transverse member spaced apart by a central support member. Applicant respectfully traverses the rejection.

The claims, as amended, recite an implant having first and second load bearing surfaces connected by a central supporting member with a width less than a width of the load bearing surfaces. Boyd et al. does not teach or suggest such an implant, and thus cannot be seen to anticipate the claims, as amended. Withdrawal of the rejection is respectfully requested.

It is respectfully submitted that each of the presently pending claims are in condition for allowance and notification to that effect is respectfully requested.

The Examiner is invited to contact Applicant's representative at the below-listed telephone number, if it is believed that prosecution of this application may be assisted thereby.

Respectfully submitted,

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MARKED-UP VERSION TO SHOW CHANGES MADE

Please amend claim 1 and add new claims 36-52 to read as set forth below:

1. (Amended) An implant for intervertebral fusion between opposing vertebrae, said implant comprising:
 - an implant body having a first end and a second end spaced [apart by] along a longitudinal axis of the [implant] body, said first end having a first diameter and said second end having a second diameter wherein the second diameter is larger than the first diameter; and
 - said implant body comprising [a] first [transverse member having a first] and second load bearing surfaces [and a second transverse member having a second bearing surface; and
 - said first and second transverse members are] spaced apart by a central support member, the central support member having a width narrower than a width of the first and second load bearing surfaces.
36. (New) The implant of claim 1, wherein said first and second load bearing surfaces are non-continuous.
37. (New) The implant of claim 1, wherein said body is tapered at least at said first end.
38. (New) The implant of claim 1, wherein a distance between the first and second load bearing surfaces varies along the longitudinal axis.
39. (New) The implant of claim 1, wherein the diameter of the second end is greater than a diameter of the implant at at least one other point along the longitudinal axis.

40. (New) The implant of claim 1, wherein said body tapers from said second end to said first end.
41. (New) The implant of claim 40, wherein said body tapers at an angle of 8°.
42. (New) The implant of claim 1, wherein said first and second load bearing surfaces include portions of a helical thread pattern.
43. (New) The implant of claim 1, wherein said first and second load bearing surfaces include a pattern for anchoring to a vertebral body.
44. (New) The implant of claim 1, wherein said central support member extends from said first end to said second end of said implant.
45. (New) The implant of claim 44, wherein said central support member includes at least one opening therethrough.
46. (New) The implant of claim 1, wherein said central support member comprises a plurality of columns.

47. (New) The implant of claim 1, wherein said central support member passes through a single plane between diametrically opposed regions of said first and second load bearing surfaces.
48. (New) The implant of claim 1, wherein said body is generally "I" shaped in cross-section.
49. (New) An implant for intervertebral fusion between opposing vertebrae, said implant comprising:

- an implant body having a first end and a second end, said body having first and second load bearing surfaces extending along a longitudinal axis of the body, the first and second load bearing surfaces having a width extending perpendicular to the longitudinal axis, said first and second load bearing surfaces being spaced apart by a first height at the first end and a second height at the second end, wherein the first height is less than the second height; and

- said implant body comprising a central support member connecting the first and second load bearing surfaces, the central support member having a width narrower than the width of the first and second load bearing surfaces.

50. (New) The implant of claim 49, wherein the implant body has a continuous taper from the second end to the first end.

51. (New) An implant for intervertebral fusion between opposing vertebrae, said implant comprising:

- an implant body having an I-shaped cross section, the body having a first end and a second end;

- said body having first and second load bearing surfaces having a length extending along a longitudinal axis of the body; and

- said first and second load bearing surfaces being connected by a central support member extending along the length of the load bearing surfaces, the central support member having a width narrower than a width of the first and second load bearing surfaces, the central support member having a first height at the first end and a second height at the second end, wherein the first height is less than the second height.

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52. (New) The implant of claim 51, wherein the implant body has a continuous taper from the second end to the first end.